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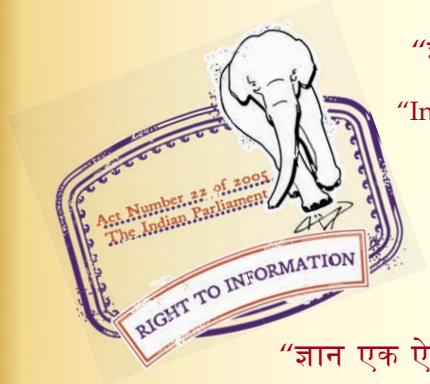
IS 3392 (1965): Anaesthetic Airways [MHD 13: Veterinary Hospital Planning and Surgical Instruments]



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Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS : 3392 - 1,965

Indian Standard

(Reaffirmed 1998)

SPECIFICATION FOR ANAESTHETIC AIRWAYS

(First Reprint JUNE 1990)

UDC 615.476 : 616.089.5

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 2 *February 1966*

Indian Standard

SPECIFICATION FOR ANAESTHETIC AIRWAYS

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SPECIFICATION FOR ANAESTHETIC AIRWAYS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 23 December 1965, after the draft finalized by the Anaesthesia, Resuscitation and Allied Equipment Sectional Committee had been approved by the Consumer Products Division Council.

0.2 This standard is one of a series on anaesthetic equipment, formulated at the instance of the Advisory Committee for Development of Surgical Instruments, Equipment and Appliances of the Ministry of Industry and Supply, Government of India. Other specifications published so far in the series are:

IS : 3390-1965 Sphygmomanometers, mercurial

IS : 3391-1965 Stethoscopes

IS : 3393-1965 Mouth props and airways (London hospital pattern)

0.3 This standard relates essentially to the size description of anaesthetic airways for affording ready means of identification of components coming within the prescribed range of sizes. To allow wide scope for manufacturers in the development of both design and materials, requirements have been restricted. to general aspects relating to functional suitability, durability and safety.

0.4 In the preparation of this standard, assistance has been derived from the following:

IND/GS/MED/962 Airways Water's, infant and small. Chief Inspectorate of General Stores, Ministry of Defence, Government of India.

B. S. 2927 : 1957 Anaesthetic airways. British Standards Institution.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rule-s for rounding off numerical values (*revised).*

1. SCOPE

1.1 This standard covers the requirements for anaesthetic airways of the following types:

a) Birt's,
h) Guedel's,
c) Phillip's, and
d) Water's.

2. SHAPE AND DIMENSIONS

2.1 The general shape, dimensions and range of nominal sizes of anaesthetic airways shall be as given in Table 1 and Fig. 1 to 4.

TABLE 1 DIMENSIONS OF ANAESTHETIC AIRWAYS

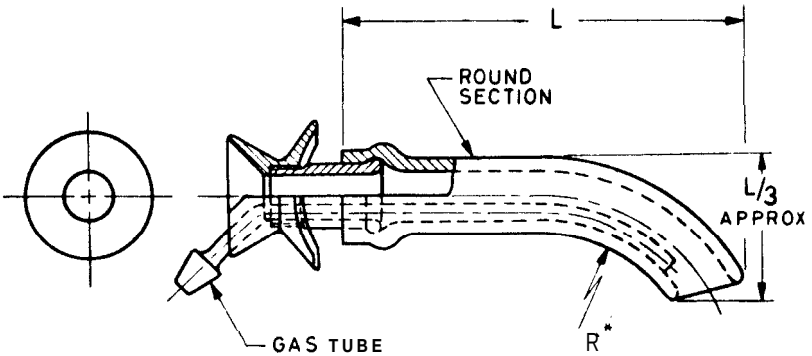
COMMERCIAL DESIGNATION	SIZE DESCRIPTION	DIMENSION *L*. *Max*	MINIMUM EFFECTIVE AREA OF LUMEN
(1)	(2)	(3)	(4)
		mm	mm^2
000/36	Infants	36	20
00/46	Infants	46	30
0/56	Infants	56	40
1/70	Children	70	50
2/85	Small adults	85	60
3/100	Medium adults	100	70
4/115	Large adults	115	110

3. MATERIALS

3.1 Anaesthetic airways shall be made of metal complying with the requirements of 3.1.1 or from suitable compounded elastomeric materials complying with the requirements of 3.1.2 and 3.1.3 or 3.1.4.

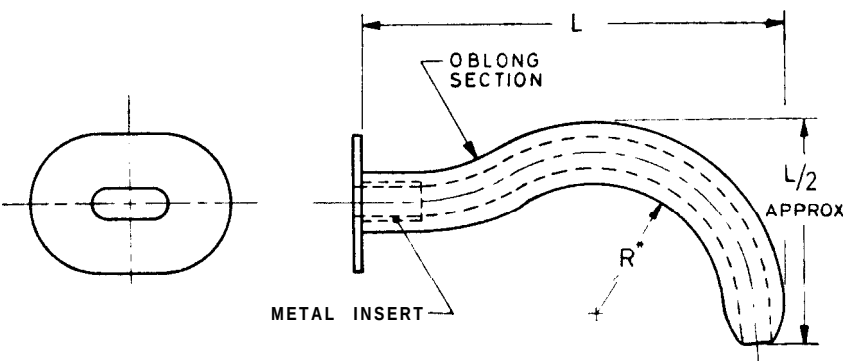
3.1.1 *Metal* — Water's airways and metal fittings for Birt's, Guedel's and Phillip's airways shall be made from suitable corrosion resisting metal or from metal finished with durable and corrosion resisting surface coating. If plating is done it shall be chromium over nickel conforming to Grade C of IS : 1068-1958*.

*Specification for copper and chromium electroplated coatings.



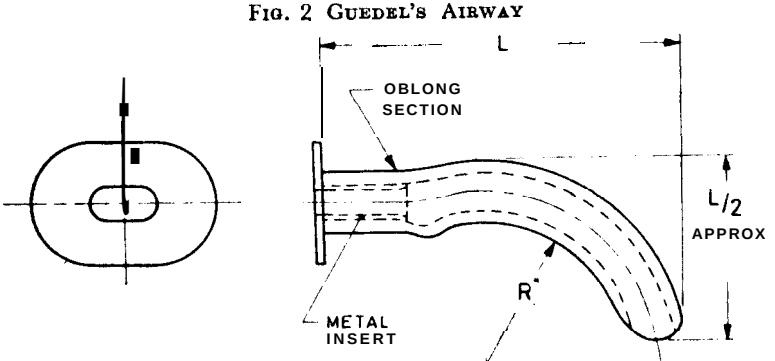
*Radius R = 30 to 35 mm Approx

FIG. 1 BIRT'S AIRWAY



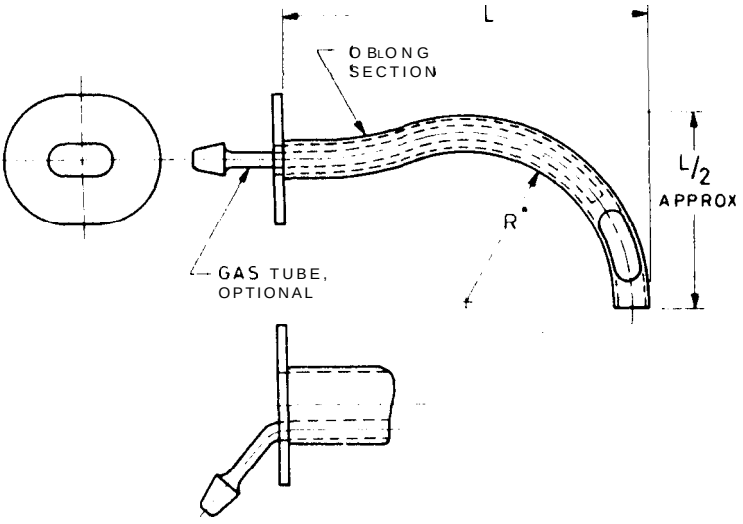
*Radius R = 30 to 35 mm Approx

FIG. 2 GUEDEL'S AIRWAY



*Radius R = 30 to 35 mm Approx

FIG. 3 PHILLIP'S AIRWAY



*Radius R = 30 to 35 mm Approx

FIG. 4 WATER'S AIRWAY

3.1.2 Elastomeric *Materials* — Compounded elastomeric material shall not include in its composition any substance known to have a harmful effect on human tissue.

3.1.2.1 Compounded elastomeric materials shall be subjected to accelerated ageing test by oven method as described in IS : 3400 (Part IV)-1965*. The ageing period shall be 168 hours and the temperature of oven shall be maintained at 70° ± 1°C.

3.1.3 *Compounded Rubber* — Airways made of compounded rubber shall be vulcanized and after manufacture shall be capable of being autoclaved in saturated steam at a temperature of 120°-121°C (1-055 kg/cm² gauge) for not less than two hours without showing appreciable stiffening, softening or cracking.

3.1.4 *Plastics Material* — Airways made of plastics material shall be capable of withstanding immersion in continuously boiling water for not less than 36 hours without loss of shape or other significant deterioration.

*Method of test for accelerated ageing on vulcanised rubbers (*under preparation*).

4. MANUFACTURE, WORKMANSHIP AND FINISH

4.1 The flanged end of airways made of elastomeric materials shall be reinforced with a metal insert. This insert shall be flanged or otherwise made incapable of moving down the airway and shall remain immovable under ordinary conditions of use. The edges of the airways shall be smooth and rounded off to prevent injury to the patient during use.

4.2 The airway shall be sufficiently and permanently rigid at the flanged end to withstand compression by teeth.

4.3 Anaesthetic airways shall have sufficient rigidity to keep the base of the tongue of the patient in a forward position and shall be so designed that they function reliably and safely under normal conditions of use. The external surface shall be smooth.

5. MARKING

5.1 Each airway shall be clearly and legibly marked with the size, manufacturer's name, initials or recognized trade-mark.

5.1.1 The airways may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a w&defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6. PACKING

6.1 The anaesthetic airways shall be wrapped in tissue paper or wax paper and packed in cardboard boxes. A label indicating the manufacturer's name, initial or trade-mark shall be pasted on the box.

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